REMARKS

Claims 1, 4, 6, 9, and 10 are pending in the application, with claims 1 and 6 in independent form. No claims are presently amended, added, or cancelled. Claims 2-3, 5, and 7-8 were previously cancelled. No new matter has been added.

The Examiner has maintained the prior rejections in making the instant Office Action final. In particular, claims 1, 4, 6, and 9 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,114,402 to Smith. Claims 1, 4, 6, and 9 also stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,668,187 and its equivalent, Japanese Patent Pub. No. JP06336513, both to Asako et al. (hereinafter referred to as "the Asako references").

The Applicants respectfully continue to traverse the Examiner's apparent finding that certain elements of the instant claims are necessarily present and, thus, inherent in the teachings of Smith and/or the Asako references.

As to the interpretation to be given to Independent claims 1 and 6, these claims expressly claim specific amounts of compound (i) that are used to make the polyurethane foams, and these claims further claim that the unsaturated functionality from compound (i) is either 1) reacted with a primary and/or secondary amine, **or** 2) remains unreacted. Independent claims 1 and 6 are clear that 1) and 2) are exclusive, i.e., that there is no other activity or other possible reaction schemes that involve the unsaturated functionality from compound (i). Thus, to be anticipated, a prior art polyurethane composition must account for the amounts of compound (i) claimed in the instant claims **with the unsaturated functionality of the claimed amount of compound (i) being 1) reacted with a primary and/or secondary amine or 2) unreacted.**

In view of the above clarification of the claim scope of claims 1 and 6, it is clear that Smith and/or the Asako references do not anticipate independent claims 1 or 6 because the unsaturated functionality is present in the polyurethane products disclosed therein for different reasons and is not bound by options 1) or 2) as claimed in claims 1 and 6, and the Applicants respectfully submit that residual amounts of hydroxyethyl acrylate (HEA) present in the polyurethane products of Smith and/or the Asako references with unsaturated functionality thereof remaining unreacted **are not necessarily present in the amounts claims for compound (i) in the instant claims**.

With regard to the Examiner's reliance on the inherency standards to reject the instant claims, as the Examiner is aware, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. See MPEP 2112(IV.) citing *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, **may not be established by probabilities or possibilities**. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " See MPEP 2112(IV.) citing *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." See MPEP 2112(IV.) citing *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In determining whether or not the Patentee in Smith and/or the Asako references could have added the subject matter at issue into

the specifications thereof, it is important to recognize that **the rationale behind the inherency tool** is to accommodate situations in which the common knowledge of technologists is not recorded in the reference; that is, where technological facts are known to those in the field of the invention, albeit not known to judges. See MPEP 2131.01(III) citing *Continental Can Co. USA v. Monsanto Co.,*948 F.2d 1264, 1268.

With regard to Smith, an additive organic compound having an unsaturated group is reacted with isocyanate during production of polyurethane foam to form an isocyanate prepolymer having an unsaturated group. Smith teaches further reaction of the unsaturated group of the additive organic compound with a monomer-containing unsaturated polyester resin composition (see column 2, lines 36-45). Notably, HEA is **only** disclosed for use in Example 6, in which the HEA is **only present in an amount of 10% by weight based on the weight of the additive organic compound**, which is Tone M-100 for purposes of Example 6 (see column 8, lines 1-4). The Tone M-100 is **only used in an amount of 5 parts based on the isocyanate** (refer to Column 7, line 63, which indicates that Examples 2-4 were repeated. 5 parts of the additive organic compound based on the isocyanate were used for each of those Examples). Further, the isocyanate is used in an amount of 100 parts to 86.7 parts of other components in the "Polyol Side B" (refer to the table in column 5, lines 45-62). As such, the **HEA is only used in an amount of 0.26 parts by weight based on the total weight of all components used to make the polyurethane product of Smith.** Coupled with the fact that Smith teaches reaction of the unsaturated group of the additive organic compound with a monomer-containing unsaturated resin, **it is clear that Smith does not necessarily teach that HEA having unreacted unsaturated groups is present in the polyurethane products in an amount of at least 0.1% (which would be necessary to inherently anticipate claims 1 and 6), and absolutely does not teach that HEA having unreacted unsaturated groups is**

present in the polyurethane products in an amount of at least 0.5% (which would be necessary to inherently anticipate claims 4 and 10). For these reasons, the Applicants respectfully request the Examiner to reconsider the inherent anticipation rejections relying upon Smith.

With regard to the Asako references, these references teach use, as a blowing agent, of an aqueous polymer emulsion comprising a polymer of ethylenically unsaturated monomers in the preparation of polyurethane foam. While the polymer is a polymer of unsaturated monomers, those of skill in the art readily appreciate that the polymer resulting from polymerization of unsaturated monomers **no longer includes unsaturation**. Rather, the unsaturation is consumed during formation of the polymer. It is apparent that the Examiner has recognized this fact, but is relying on residual amounts of unreacted monomer to argue that HEA is taught by the Asako references to be present in the polyurethane product that is produced with the blowing agent of the Asako references. However, close examination of the Asako references proves that the claimed amounts of compound (i) having unsaturated functionality **are not necessarily present in the polyurethane products taught by the Asako references.** The Asako references teach that the blowing agent can be made through polymerization of an aqueous emulsion of a monomer, in which the monomer may be present in an amount of up to 70% (refer to column 2, lines 13-19). Even after such polymerization of the monomer, **it is a distinct possibility that all monomer may be reacted in the blowing agent or may be flashed off**. As such, the presence of residual monomers in the blowing agent is not even a necessarily present feature of the blowing agent. Further, the polymer emulsion is only used in an amount of up to 20 parts by weight based on 100 parts by weight of the polyol that is used to form the polyurethane, thereby even further diluting the amount of any

residual unsaturated monomers (if any) that would be present in the final polyurethane product. Further still, the polyol is reacted with isocyanate, thereby even further diluting the amount of any residual monomers (if any) that would be present in the final polyurethane product. Finally, **the polymer emulsion is used as a blowing agent, thereby indicating that the emulsion is intended to vaporize and exit the polyurethane product.** Such vaporization will clearly result in most of the emulsion itself leaving the polyurethane product, and lower molecular weight monomers will clearly vaporize prior to vaporization of higher molecular weight polymers. The sum of each of these facts clearly establishes that residual HEA monomer is necessarily present in the final polyurethane product (if there is any at all) in the amounts claimed for compound (i) in the instant claims. For these reasons, the Applicants respectfully request the Examiner to reconsider the inherent anticipation rejections relying upon the Asako references.

To further illustrate the fact that the features of the instantly claimed invention are **not** inherent in the disclosure or teachings of Smith and/or the Asako references, it may be helpful for the Examiner to consider whether or not the Patentee in Smith and/or the Asako references **could have properly added the features of the instantly claimed invention into the specifications thereof without encountering new matter objections**. After all, inherent support of new matter within an application is sufficient to satisfy the written description requirement. See MPEP 2163(3.)(b). In particular, the proper question would be whether or not Smith and/or the Asako references could properly add language that specifies that HEA taught therein **is present in the final polyurethane products** in an amount of from 0.1 to 20% by weight based on the weight of the polyurethane foam **and that unsaturated functionality of the HEA is** unreacted. Clearly, the instant claim elements at issue fall outside of the realm

of common knowledge of technologists and is not information that is merely absent from the express disclosure of Smith and/or the Asako references. In fact, the instant claim elements at issue **are directly contrary to the role of the unsaturated functionality in both Smith and the Asako references.** The Examiner's reliance on so-called "residual unreacted monomer" is insufficient to overcome the fact that the unsaturated functionality in the monomers of both Smith and/or the Asako references is expressly intended to be present for other activity or other possible reaction schemes other than 1) or 2). As such, a compound (i) as claimed in the instant claims, present in the claimed amounts and having unsaturated functionality that is either 1) reacted with primary and/or secondary amines or 2) remains unreacted **is not a technological feature taught by Smith and/or the Asako references** that is known to those of skill in the art but has merely been omitted from those references. As such, the Applicants respectfully submit that the Examiner's rejections based upon inherent anticipation are further in error on this basis and must be withdrawn.

In view of the foregoing, the Applicants respectfully assert that the present claims are both novel and non-obvious in view of the prior art relied upon by the Examiner. As such, the Applicants respectfully submit that the claims are now in condition for allowance and respectfully request such allowance.

This Response is timely filed and is filed within the 2-month period for response to a final Office Action. Thus, it is believed that no further fees are presently due. However, the

Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys, P.C., for any fees or credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS

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